



The following listing of claims replaces all previous listings and versions of claim in this application.

1. (Currently Amended) A biocompatible matrix comprising hyaluronic acid and laminin cross-linked by an exogenous cross-linking agent to form a combined gel, wherein the ratio of hyaluronic acid to laminin is in the range of about 20:1 to about 400:1, further comprising a bioactive compound or drug selected from the group consisting of a hormone, a growth factor, an antioxidant, a proteolytic enzyme, an anti-fibrotic agent, a chemotherapeutic anti-proliferative agent, a coagulative agent, an anti-coagulative agent, an immunomodulator, [[or]] and a growth inhibitor.
2. (Cancelled)
3. (Currently Amended) The biocompatible matrix of ~~claim 2~~ claim 1, wherein the exogenous cross-linking agent is a sugar.
4. (Original) The biocompatible matrix of claim 1 wherein the gel has a viscosity of 4-48 centipoise.
5. (Original) The biocompatible matrix of claim 1 comprising 0.05% to 5% of hyaluronic acid.
6. (Original) The biocompatible matrix of claim 1 comprising 0.005% to 0.5% of laminin.
7. (Currently Amended) The biocompatible matrix of claim 1 wherein the growth factor is selected from the group consisting of brain-derived neurotrophic factors (BDNF), nerve growth factors (NGF), insulin-like growth factor-1 (IGF1), leukemia inhibitory factor (LIF), pifithrin- α and [[an]] antisense oligonucleotides of p53.

8. (Original) The biocompatible matrix of claim 1 wherein the antioxidant is selected from the group consisting of ascorbic acid, dehydroepiandrosterone (DHEA), melatonin, N-acetyl-L-cysteine and retinoic acid.

9. (Currently Amended) The biocompatible matrix of claim 1 further comprising a structural component selected from the group consisting of an extracellular matrix component, a natural polymer, a synthetic polymer, ~~[[or]]~~ and a mixture thereof.

10. (Currently Amended) The biocompatible matrix of claim 1 further comprising a cell culture comprising a plurality of cells other than cells of a neuronal explant derived from the central nervous system or the peripheral nervous system. ~~whereas the cells are cultured in or upon the matrix to form a combined gel.~~

11. (Previously Presented) The biocompatible matrix of claim 10 comprising a plurality of cell types.

12. (Currently Amended) The biocompatible matrix of claim 10 comprising a cloned cell ~~type~~.

13. (Currently Amended) The biocompatible matrix of claim 10 comprising a bioengineered ~~type~~ cell.

14. (Currently Amended) The biocompatible matrix of claim 10 comprising ~~[[an]]~~ autologous cells ~~cell type~~.

15. (Previously Presented) The biocompatible matrix of claim 10 comprising stem cells.

16. (Currently Amended) The biocompatible matrix of claim 15 ~~comprising an~~ wherein the stem cells are embryonic stem cells ~~cell type~~.

17. (Currently Amended) The biocompatible matrix of claim 15, wherein the stem cells comprising an are adult stem cells cell type.

18. (Currently Amended) The biocompatible matrix of claim 17, wherein the stem cells are comprising a bone-marrow stem cells cell type.

19. (Currently Amended) The biocompatible matrix of claim 10, further comprising where the cells are on the exposed surface of a combined hyaluronic acid laminin gel; a structural component selected from the group consisting of an extracellular matrix component, a natural polymer, a synthetic polymer and a mixture thereof.

20. (Currently Amended) The biocompatible matrix of claim 10, wherein the cultured cells comprising comprise endothelial cells cell types.

21. (Cancelled)

22. (Cancelled)

23. (Currently Amended) A method for preparing a biocompatible matrix according to claim 1 ~~to be implanted in a human subject~~, which comprises the steps of:

(a) hydrating a hyaluronic acid or salt or hyaluronan;

(b) selecting a laminin solution; and

(c) cross-linking the hydrated hyaluronan and laminin to form a combined gel; and

(d) adding a -with the optional addition bioactive compound or drug or structural components; to form a combined gel the matrix. [[;]]

24. (Original) The method of preparing the biocompatible matrix of claim 23 which further comprises shaping the matrix.

25. (Currently Amended) The method of claim 23 which further comprises the step of culturing or embedding cells in or on the matrix gel.

26. (Currently Amended) The method of claim 25 wherein the cultured cells are adherent on ~~an exposed~~ the surface of the ~~combined gel~~ matrix.

27. (Original) The method of claim 26 wherein the cultured cells are endothelial cells.

28. (Currently Amended) The method of claim 23 ~~further comprises supplementing the gel with~~ wherein the bioactive compound or drug is selected from the group consisting of a hormone, a growth factor, ~~an anti-oxidant, a proteolytic enzyme, an anti-fibrotic agent, a chemotherapeutic anti-proliferative agent, a coagulative agent, an anti-coagulative agent, an immunomodulator, or a growth inhibitor.~~

29. (Original) The method of claim 28 wherein the growth factor is selected from the group consisting of brain-derived neurotrophic factors (BDNF), nerve growth factors (NGF), insulin-like growth factor-1 (IGF1), leukemia inhibitor factor (LIF), pifithrin- α and antisense oligonucleotides of p53.

30. (Currently Amended) The method of ~~claim 27~~ claim 23 wherein the bioactive compound is an antioxidant ~~[[is]]~~ selected from the group consisting of ascorbic acid, dehydroepiandrosterone (DHEA), melatonin, N-acetyl-L-cysteine and retinoic acid.

31. (Currently Amended) A method for transplanting cells other than neuronal cells to an individual in need thereof, comprising the step of transplanting~~[[in]]~~ into the individual an implant comprising the biocompatible matrix according to claim 22 of claim 1.

32. (Currently Amended) A medical device comprising the biocompatible matrix of claim 1, and further comprising endothelial cells ~~attached to an exposed surface of the gel~~.

33. (Currently Amended) The medical device of claim 32 wherein the biocompatible matrix forms a coating on ~~the exposed surfaces of~~ the device.

34. (Currently Amended) The medical device of claim 32 ~~further comprising wherein~~ [[a]] the bioactive compound or drug is a growth factor.

35. (Cancelled)

36. (New) The method of claim 23, further comprising adding a structural component selected from the group consisting of an extracellular matrix component, a natural polymer, a synthetic polymer and a mixture thereof.